

THE GLOBAL VILLAGE: A STUDENT-LED INITIATIVE FOR INTERCULTURAL SKILLS

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ABSTRACT

Although the 21st century has seen increased internationalization of higher education, many institutions retain a deficit view of international students. Moreover, there is overwhelming evidence that home and international students rarely engage naturally in meaningful intercultural interaction. Many contributing factors have been identified, such as social isolation, problems of cross-cultural adaptation for international students, language difficulties, and peer pressure for home students. To remedy this situation, there is clearly a need for student voices to be heard. This paper presents a study of a student-run, annual, intercultural event called the Global Village, which takes place on the campus of a French Graduate Engineering School. Since 2005, this one day event has transformed the campus into a vibrant, bustling marketplace, where students from all over the world set up decorated stands, serve traditional food and perform songs and dances. Firstly, we analyze the learning outcomes of this informal event for students, using an international syllabus and our Intercultural competence framework, supported by the results of questionnaires and interviews. We then show how the event also addresses other educational standards. Finally, we discuss possible improvements and suggest transferable initiatives to further include intercultural, integrated learning experiences into engineering education.

KEYWORDS

Diversity management, Intercultural competence and skills, Student involvement, Innovations in teaching and learning, Multicultural education.

INTRODUCTION

This paper presents a study of a student-run, intercultural event called the Global Village (GV), which has taken place on the campus of Telecom Bretagne (TB), a French Graduate Engineering School, every spring since 2005. For one day a year, the campus, which houses around 800 students, is transformed into a vibrant, bustling marketplace, where students from all over the world set up decorated stands, serve traditional food and perform songs and dances. The structure of the paper is as follows: a literature review of the issues involving the multicultural campus is followed by a description of TB's integrated curriculum and the

intercultural learning outcomes recommended for engineers at a national and European level. We then present our intercultural competence framework and the Intercultural competences we have identified in an international syllabus which will be used to analyze the learning outcomes of the GV for students. The main body of the paper consists of a description and analysis of the event through questionnaires, interviews and observations. We then show how the event addresses other educational standards. Finally, possible improvements are discussed and transferable initiatives to further include intercultural, formal or informal integrated learning experiences into engineering education are suggested.

THE INTERCULTURAL ENCOUNTER

The 21st century has seen increased internationalization of higher education, particularly in Europe where, according to a report on mapping student mobility between 1998 and 2007, there has been at least a 50% increase of foreign nationals studying abroad [1]. However, as De Vita [2], points out, the ideal of transforming students' international experience into "international connectivity, social cohesion and intercultural learning" has not generally been achieved and many institutions and individuals retain a deficit view of international students.

There is overwhelming evidence that home and international students rarely engage naturally in meaningful intercultural interaction. For international students, contributing factors such as financial, linguistic or academic difficulties, high stress levels, problems of cross-cultural adaptation and social isolation have been identified [3, 4, 5, 6]. Friendship groups are often restricted to people from the home culture, or from cultures perceived as similar to the home culture, or to other international students [5, 7]. For home students, forming friendships outside their immediate group is also seen to require more social effort, with possible language difficulties, clashes between different values, or negative peer judgment. Other barriers to meaningful intercultural contact include the perception that international students represent parental authority, are academically superior, more motivated and will be judgmental about their leisure pursuits [8].

A growing body of research emphasises the complexity of the intercultural encounter: it is co-constructed, students are not a homogeneous group and individual goals and agency can lead to very different results [5, 6, 8, 9, 10]. For instance, Murphy-Lejeune [3] identifies differing degrees of what she terms, 'mobility capital', building on the French sociologist, Bourdieu's notion of 'cultural capital' [11]. Personality traits, like sociability and openness, combine with prior experience of adaptation, such as long-term travel abroad and differing levels of sociocultural, interpersonal and personal skills, to prepare students for successful intercultural interaction. The studies reviewed also highlight the need for curricular intervention [9], well-planned communal orientation programmes [8], institutional recognition of the international experience for students and staff [5], specific intercultural training for both students [12, 13], academic and support staff [14, 15].

A CURRICULUM INCORPORATING INTERCULTURAL AWARENESS AND SKILLS

An International Institution with an Integrated Curriculum

The school in this study, Telecom Bretagne (TB), is a French public research institute and graduate engineering school (*Grande Ecole*) offering a degree in ICT through a program at MSc level, in compliance with the European and national higher education accreditation systems. Founded in 1977, with a strong international dimension, the school is situated on a multicultural campus, with 45% International students. There are also international agreements with more than 70 universities worldwide. TB has around 200 engineering graduates a year, who are provided with a broad education in engineering and an opportunity to develop a large range of skills, from economics to internationalization. Since 1994, student

projects have been gradually included in the program, with a strong focus on team work, project management, and interpersonal and intercultural skills.

In 2003, in line with European requirements on competencies and student exchange, TB reformed its curriculum to integrate a personal and professional skills and competency focus, using Project-BL and active pedagogies [16]. The new integrated curriculum includes disciplinary minors and majors, industrial placements, an active career preparation course for all students [17], and four semester projects (approx. 120 hours per student, per semester, in international teams from 4 to 8 students). In 2008, the school opted to use the Conceive-Design-Implement-Operate (CDIO) standards [18] as a dynamic tool for continuous improvement of its educational system. Our approach now results in a better formalization of learning outcomes and alignment with CDIO standards [19], thanks to the Standard 12 evaluation process. Among them, intercultural skills are now part of the syllabus and curriculum, addressed through various formal pedagogical activities and informal events.

Recommended Intercultural Learning Outcomes

TB is monitored by the French Engineering Accreditation Board (*Commission des titres d'ingénieur*- CTI). The CTI emphasizes the need for internationalization for future engineers, requiring all graduates to have a certified level of English proficiency and a two month stay abroad. Study of a second foreign language is also highly recommended. Schools should have an “international outlook” and encourage “international mobility for students” and the “enrolment of foreign students” [20]. TB was one of the first engineering schools in France to adopt the Common European Framework for language learning [1] which provides comprehensive guidelines for assessment or self assessment of language levels. This framework aims to encourage learners to develop: “communication strategies to enhance contact with those from other cultures”. The goal is no longer to attain near native speaker competence but to become “cultural intermediaries” or “Intercultural mediators”, engaging in “intercultural dialogue”. The Scientific Committee on Intercultural Communication [21] also recommends that an intercultural dimension should be included in all subjects.

The Intercultural Competence Framework

In order to implement these recommendations, we have developed a research and teaching model [14, 7] with an intercultural competence framework (ICF), based on a combination of the 5 *savoirs* model [22] and Demorgon's multiperspectivist approach [23]. The five *savoirs* model was developed as a guideline for the skills and competences aimed at in the teaching of language and culture in Europe, although they have not all been integrated into the CEFR. The model focuses specifically on informed communication and interaction with the other, across cultural boundaries. The five *savoirs* are defined as follows:

Savoir-être (attitudes and values): Ability to see yourself as someone from another culture might see you, to question what you previously took for granted, and to accept the validity of different cultural attitudes and values. Respect for and enjoyment of diversity.

Savoirs (knowledge): Knowledge of the social organisation, institutions, products, practices and expectations and of the visible and invisible signs of beliefs, behaviours, values and assumptions acquired or learned by members of one's own and other cultures.

Savoir-comprendre (skills of interpreting and relating): Ability to interpret ideas, documents or events from one's own or another culture and to relate them to one's own and other's social identity

Savoir s'engager (critical cultural awareness): Ability to evaluate products, processes and practices of your own and other cultures with an open-mind in order to proceed on the basis of new perspectives

Once a learner's intercultural competences have been identified or self assessed using this framework, they can then be contextualized by the use of Demorgon's multiperspectivist model [23], in order to take the wider context into account. For the purposes of this study we

have focused on Demorgon's three steps of cultural analysis, namely, Step 1, Comparison and description, Step 2, Comprehension and explanation and Step 3, Dialogue and engagement. While the first step goes beyond naïve stereotyping to identify the differences and similarities between cultures, the second step tries to understand and explain the origins of cultural values, norms and artifacts. The third step combines individual and collective reactions to the uncertainties of interculturality with informed action in a global context.

Intercultural Skills in the CDIO Syllabus

The June 2011 extended CDIO syllabus, which we used for our analysis, contains some interesting descriptors for Intercultural competence, although, as Campbell and Beck [24] point out, these could be extended. The competences which were particularly relevant to our study were as follows:

2.4.2 A **willingness to work with others** and embrace various viewpoints

2.5.2 **Professional behaviour**: International customs and norms of interpersonal contact

2.5.5 **Equity and Diversity**: A commitment to treat others with equity - Embracing diversity in groups and workforce - Accommodating diverse backgrounds

3.1.1 **Forming Effective team**: The goals, needs and characteristics (work styles, cultural differences) of individual team members

3.2.2 **Cross-disciplinary cross cultural communication**

3.2.10 **Establishing Diverse Connections and Networking**: Appreciating those with different skills, cultures or experiences – Engaging and connecting with diverse individuals

3.3 **Communications in Foreign Languages**

4.1.4 **The Historical and Cultural Context**

4.1.6 **Developing a Global Perspective**: The similarities and differences in the political, social, economic, business and technical norms of various cultures

A comparison of these standards with the ICF reveals a large number of skills of discovery and interaction, while more specific intercultural knowledge and attitudes and critical cultural awareness are less present. On the other hand, the CDIO syllabus focuses more on international team building and professional skills. Taking the larger societal and global context is present in both the ICF (with skills of interpreting & relating, critical cultural awareness and Demorgon's step 3), and item 4.1., as are positive attitudes towards diversity. As we show later, other CDIO items, such as more general personal skills and attitudes, for instance 2.5.6 Trust and Loyalty, were also found useful for our analysis.

Intercultural Pedagogical Activities in the TB Curriculum: An Overview

As seen in the literature review, the multicultural campus does not automatically become an intercultural one and some problems of isolated, monocultural groups (called *communitarisme* in French) or lack of openness to difference persist at TB [14, 10]. These problems are being addressed by providing many opportunities for Intercultural learning both on a daily basis and more formally throughout the curriculum. Students must study at least 2 foreign languages and attend a compulsory Diversity Management Module. There are also optional Intercultural Communication and Management classes, all taught in English. Francophone international students have specific classes on French cultural values and communicational norms [25]. The intercultural dimension of student project work is being increasingly developed. For international students, there is also a bridging semester and a pre-session Summer School. English classes and Intercultural training workshops are organised for both the Board of Directors and academic and support staff.

At TB, these academic, pastoral and cultural initiatives are enriched by strong links in international research and development communities, such as the CDIO network. Research on Intercultural competences and didactics is well established, including participation in European funded research projects, such as the Language Online Portfolio project

(LOLIPOP) and EMA4Moodle, a language and Intercultural awareness distance learning method. Both the Entertainments Officer (*Animateur*) and the International Student Union, which is a member of the Erasmus Student Network (ESN), play an active role in welcoming students. ESN's goals are to facilitate cultural exchanges on the campus, welcome and support international students and inform French students of mobility opportunities.

THE GLOBAL VILLAGE (GV) OVERVIEW

In this section, we present a study of a particularly successful event organised by the students of the ESN, with the participation of other students and support of the Language and International TB departments. The GV is an annual, intercultural event which transforms the campus into a vibrant, bustling marketplace, where students from all over the world set up decorated stands, serve traditional food which they have prepared themselves and perform songs and dances [26]. Other attractions include demonstrations of calligraphy, origami and henna hand decoration. At first glance, this event could be assumed to be a demonstration of the 4 Fs (Foods, Fairs, Folklore and statistical Facts) approach to culture [27], which we call “feasts and festivals”. However, we will show how a closer examination reveals numerous organisational and intercultural skills and competences displayed by the students.

This informal, non-compulsory event, which has been held annually every spring since 2005, is almost totally student-initiated and run. It takes place in a communal, “in-between” space (CDIO Standard 6), with a winter garden, at the centre of the campus which is accessible to staff and students alike. In 2011, there were 31 stands from 25 different countries and 6 French regions and some 500 visitors, who included students from TB and other schools, academic and support staff and their families, the Board of Directors and the local press. The largest stands were from China and Morocco, reflecting the high number of representatives from these two countries, but the Lebanese stand, run by a small number of students, was also extremely popular.

ASSESSMENT AND EVALUATION

TB supports initiatives such as the GV, along with other non-formal, student led extra-curricular activities, such as student associations and active student involvement in social responsibility, sustainability or design projects. The skills acquired in such projects can allow students to gain institutional recognition in the form of ECTS credits, although this is not yet the case for those involved in the GV. Research and pilot studies are currently being carried out in the school on the inclusion of student self assessed portfolios. To encourage this process, a pilot study on the perceived learning outcomes of participation in the GV was conducted. The results were then analysed using the Intercultural framework and the CDIO syllabus, as described earlier.

The GV Feedback: Key Figures and Numbers

A simple questionnaire, with 4 open questions (How were you involved in the GV? What were the best parts for you? What could be improved? What did you learn?), was administered to 56 students, either at the end of language lessons or by e-mail. This yielded 50 replies, or a response rate of 89%. The demographics of the 50 respondents were: 44% French, 32% Chinese, 14% Moroccans, 4% Ivorians, 4% Lebanese, 2% Ecuadorian. 18% of the respondents had not attended the event (14% French and 4% Lebanese), 6% were O-*organizers* (all Moroccan), 56% P- *presenters* - stands, presentations, performances or media (12% French) and 20% were V- *visitors* (18% French and 2% Chinese). 62% of the respondents were therefore either from category O or P. This information was supplemented by interviews with two of the ESN presidents (both Moroccan males), the Entertainments

officer (French male) and 1 lecturer (French male), discussions with language teachers and by our own observations, through participation in 6 of the 8 GVs held in the school so far.

Evaluation, Qualitative Feedback

In this section, we provide an analysis of the Intercultural skills and CDIO skills and aptitudes illustrated in the student questionnaires and interviews, supplemented by observations made by the researchers and staff. As could be expected, the main focus of the student preferences and learning outcomes was on the opportunity to taste different foods and to see demonstrations of dances, music and cultural traditions or customs. All the replies correspond both to the *savoirs*, in terms of knowledge of cultural products and practices and the knowledge of international customs described in CDIO syllabus item 2.5.2. They are also overwhelmingly positive, with statements such as:

"I have known better the culture and tasted the food of every country. That is wonderful."
(Chinese student-P);

"I find that it was fabulous to know other cultures and of course their traditional foods".
(French student-V);

"Food was really good - I learned a lot about food specialties, especially in the African countries. I discovered customs and dances" (French student-V).

These replies illustrate positive attitudes, openness and enjoyment of diversity, both *savoir-être* and the "willingness to work with others and embrace other viewpoints" of item 2.4.2. "Embracing diversity", which is found in item 2.5.5 and some skills of discovery and interaction are also demonstrated. For instance, one participant observed:

"I learned that different nationalities can work together, eat together, talk together... You must understand the ideas of different people who have different nationalities."
(Chinese student-P).

The positive atmosphere and willingness to work together is highlighted in an interview with one of the organizers:

"One of the best parts is the atmosphere - one student said the Summer School was back for a day! There is a lot of joy – the students are proud to wear their traditional clothes and they take photos. The contact with all different people is great & the fact that the international students are active on the campus as they are usually less active because they have to work harder than the French students for language reasons." ESN President (Moroccan student-O)

The GV provides an ideal opportunity to communicate in foreign languages and experience different communicational norms, particularly for the international students, and both staff and researchers note numerous examples of such *skills of interaction* or of item 2.5 and item 3.2.10. For instance, a French Senior lecturer remarked:

"The Global Village is one of the only opportunities lecturers get to see what the students from different cultures are really like – otherwise in a lecture you have no real idea of the richness of the diversity on the campus."

Some students mention language or communication in the questionnaires, particularly to suggest improvements, such as:

"For the improvement, I think every country can teach their own language to the others during the global village." or: "Maybe we have to involve more the Language Dept. For example we can do stands where we speak different languages." (French students-P)

The ability to stand back one's own culture, as described in "critical cultural awareness" or Demorgon's step 3, is often observed by the staff and researchers during the GV, for instance as the presenters explain the significance of different cultural practices such as henna hand painting or showcase certain aspects of their cultural traditions. This ability is occasionally demonstrated in the questionnaires, for example:

*"Another important thing is that the GV gave me an opportunity
to look back to my own culture and my self.
Do I cherish my own culture? Do I know really well about it?
What are the profound reasons behind several traditions?
I began to ask myself these questions thanks to GV." (Chinese student-P)*

The same student also displays a true global perspective (item 4.1.6 and Demorgon's step 3) as we can see in the following quote:

*"The first thing I've experienced from GV is the contrast between cultural variety existing
since a long time ago & the fusion of cultures because of globalisation.
We can still see traditions from costumes, foods etc.,
but many of them remain in the so-called tradition & are not every-day practices.
A lot of things are disappearing, which is a pity but also a reality that has to be accepted.
However, the new elements of cultures we have developed nowadays
are certainly not the same either e.g. the ways to have fun for the young."*

Organisation of the GV is complex, due to the large number of participants and visitors, as well as technical details, such as advertising, billing and sound, light and stage management. A GV currency with a system of prepaid vouchers is also set up. 16% of the participants refer to the personal skills and aptitudes and project management skills described in the CDIO syllabus:

*"I learned how to manage a team" (Ivorian student-P);
"I've learned that it's not very easy to organise a stand and prepare the program"
(Chinese student-P);
"I learned how to organise students to put on a show" (Chinese student-P).*

Predictably, as we can see in the following quotes, the ESN organizers highlighted many of the project management skills found in items 2.4.7 and 3.1, such as anticipation, time and resource management or team operation and leadership (items 3.1.2 and 3.1.4):

*"Timing is very important. You have to anticipate by sending mails to people in December
so they can collect their costumes when they go home.
Communication beforehand is very important".*

*"One of the main skills is to divide the work efficiently and then implicate people.
For the ESN team it's our main activity so we are keen to be involved
and we make an extra effort.
It's easier than other events to get people to participate." (ESN President-O)*

They were also able to identify competences displayed by their peers, such as the self-confidence, courage and enthusiasm (2.4.2) required to perform on stage.

As well as the skills and competences identified by the students, the researchers were able to observe many more being put into operation. These included "Initiative and willingness to make decisions in the face of uncertainty and leadership" (2.4.1) and "Working to make others successful" (2.5.6), which were particularly demonstrated by O. The meticulous care

taken by both P and O, in preparing and presenting foods and displaying cultural objects showed another aspect of 2.4.2, namely “The importance of hard work, intensity and attention to detail”. Numerous examples of “Listening carefully to others with the intention to understand” (3.2.7) on the part of many students (V, P and O) and staff were also identified, as well as the more specifically intercultural skills previously mentioned.

Other CDIO standards are also addressed during the GV, such as the workspaces of Standard 6, which pinpointed the fact that the communal, in-between, liminal space used for the event is a perfect setting for the boundary work or negotiation of 3rd places, often mentioned in the Intercultural literature [27]. As we have shown, Standard 11 on student skills assessment is also addressed, although more guidelines on self assessment would need to be given to allow formal recognition of the skills involved. The active, experiential learning of Standard 8 is widely represented, with different learning outcomes both for individuals and for the different categories of students (V, P and O). Standards 9 and 10, on the development of faculty skills are also addressed to some extent.

Improvements and Recommendations

*“This day, which is shared by only a few schools and universities, shows a humanity
which is rich, colourful, respectful and full of life
& which gives full meaning to the day-to-day actions of our school.”
(Paul Friedel, TB Director, 2012)*

*“Global Village is one of the most amazing & interesting activity on campus.” (Chinese-P)
“Beautiful to see other cultures of other countries – nothing can be improved!” (Ivorian-P)*

As the above quotes suggest, the GV is highly appreciated throughout the school. The main issue for improvement identified during this study is the difference in levels of participation between the international students and French students, as reflected in the sample studied. Both organizers and staff share a wish to include more French students, a view expressed particularly strongly by the Entertainments officer. The ESN organizers are working on strategies to improve this situation and more and more French regions are represented every year. More focus on the linguistic side and on the deeper aspects of culture could also be encouraged. As one of the ESN organizers pointed out:

*“They see a lot of things and they eat and enjoy
and of course culture is more than that
but we need to find out more with small activities during the year,
which allow to discover cultures more in depth”.*

Several students also suggested closer involvement from the Language department, although this should be handled with caution, as should attempts to formalize what is a distinctly informal student-led event.

As well as the more formal initiatives to further integrate intercultural learning into engineering education we have described, many informal, transferable initiatives, which break down hierarchical barriers by encouraging cooperation between students, staff and directors, are also being developed at TB. These include lunch-time concerts, with classical music recitals and carol singing in 4 languages, informal English-speaking lunches and a play in English. Tutors for international students are recruited among both academic and support staff who organize formal and informal cultural activities. There is also an informal tandem exchange system between International and French students, where, for example, a Chinese student offers Chinese violin lessons in exchange for French lessons or a Moroccan student gives Arabic lessons and receives chess lessons.

CONCLUSION AND PERSPECTIVES

The use of a combination of our Intercultural framework and the Conceive-Design-Implement-Operate (CDIO) syllabus allowed us to identify many intercultural, professional and personal skills and aptitudes which are mobilised during the annual, student-led GV event [26]. This analysis also showed that the two frameworks can be mutually beneficial to identify the intercultural dimension of engineering education. We should like to develop this reflection further in order to enhance our previous work on Intercultural competences. We also intend to include more detailed questionnaires and interviews, based on a bigger sample, differentiating between the different student categories and focusing more closely on the other standards. Further research could include an analysis of the long-term effects of the GV, for instance the possible impact on student selection of mono or multi cultural project groups. In this way, we hope to help students and staff to make the most of this golden opportunity for intercultural and project management learning. The enjoyment of diversity, self confidence and pride in the sharing of cultural products and practices can indeed go beyond the “feasts and festivals” approach to help to make the Telecom Bretagne campus a truly global village.

REFERENCES

- [1] Council of Europe (2001). "The Common European framework of reference for languages: Learning, teaching, assessment". Cambridge: University Press.
- [2] De Vita, G.T. (2005). "Fostering Intercultural Learning through a Multi-cultural Classroom". In: Carroll, J. and Ryan, J. (eds). *Teaching International Students*. Oxford: Routledge.
- [3] Murphy-Lejeune, E. (2003). "L'étudiant européen voyageur: un nouvel étranger". Paris: Didier.
- [4] Coleman, J. (2007). "Study Abroad Research: Good Practices". Clevedon Multilingual Matters.
- [5] Lallemand, I. (2007). "Des expériences de mobilité aux échanges interculturels dans un contexte d'internationalisation de l'enseignement supérieur. Doctoral thesis". Université de Paris 3, France.
- [6] Kinginger, C. (2009). "Language Learning and Study Abroad. A Critical Reading of Research". Basingstoke: Palgrave Macmillan.
- [7] Morace, C. and Gourvès-Hayward, A. (2012). "How do French Engineers Learn from their International Experience? A Dialogue between Engineers and Researchers." *Proceedings of the 40th annual SEFI conference "2020: Meet the Future"*.
- [8] Dunne, C. (2009). "Host Students' Perspectives of Intercultural Contact in an Irish University". *Journal of Studies in International Education* 2, 3, pp. 222-239.
- [9] Allen, H. (2010). "What Shapes Short-term Study Abroad Experiences? A Comparative Case Study of Students' Motives and Goals". *Journal of Studies in International Education*, 14, 5, pp. 452-479.
- [10] Landrac, G., Gourvès-Hayward, A., Guélenoc, F., Hervé, D., Le Goff, M., Le Saout, A., and Mayet, T. (2009). "L'accueil et l'intégration des étudiants étrangers à Télécom Bretagne". Paris: Publications CEFI.
- [11] Bourdieu, P. (1986). "The forms of capital". In: Richardson, J., *Handbook of Theory and Research for Sociology of Education*. New York: Greenwood. pp. 241-258.

- [12] Josefsson, T. (2010). "Intercultural Competence in Engineering Education". 7th CDIO Conference Polytechnique Montreal.
- [13] Amelink, C., Sanderlin, N. and Tront, J. (2011). "The Process of Evaluating the Impact of an International Experience on Students' Global Engineering Skills." *Proceedings of the 41st ASEE/IEEE Frontiers in Education Conference*. Oct. 12-15.
- [14] Gourves-Hayward, A. and Morace, C. (2009). "The Challenges of Globalization in French Engineering and Management Schools: A Multiperspectivist Model for Intercultural Learning." *International Journal of Intercultural Relations*, 3, pp. 303-313.
- [15] Da Rocha Brito C., and Ciampi, M. (2011). "Frontiers of Engineering: Opportunity and Challenges". *Proceedings of the 41st ASEE/IEEE Frontiers in Education Conference*. Oct. 12-15.
- [16] Rouvrais S., Ormrod J., Landrac G., Mallet J., Gilliot J-M., Thepaut A. and Tremembert P. (2006). "A Mixed Project-based Learning Framework: Preparing and Developing Student Competencies in a French Grande Ecole". *EJEE European Journal of Engineering Education, "Engineering Competencies"*. Vol 31, 1, pp. 83-93.
- [17] Rouvrais, S. and Chelin, N. (2010). "Engineer Professional Identity: For an Early Clarification of Students' Perceptions." *Proceedings of the 6th Intl. CDIO Conference*. June 15-18, Polytechnique Montréal.
- [18] Crawley E.F., Malmqvist J., Ostlund S. and Brodeur D.R. (2007). "Rethinking Engineering Education: The CDIO Approach". Springer Verlag.
- [19] Rouvrais, S., and Landrac, G. (2012). "Resistance to Change in Institutionalizing the CDIO Standards: From a Waterfall to an Agile Improvement Model". *8th Intl CDIO Conference*. Queensland University of Technology, Brisbane, July 1-4.
- [20] CTI, Commission Des Titres D'ingénieur. (2012). "Adaptation interculturelle et internationale. Guide d'auto-évaluation". Paris.
- [21] Kelly, M., Elliott, I., and Fant L. (Eds.). (2001). "Third Level, Third Space: Intercultural Communication and Language in European Higher Education". Bern: Peter Lang.
- [22] Byram, M., and Zarate, G. (1994). "Definitions, Objectives and Assessment of Socio-cultural Competence". Strasbourg: Council of Europe.
- [23] Demorgon, Jacques. (2010). "Complexité des cultures et de l'interculturel. Contre les pensées uniques". 4th ed. Paris: Anthropos. Economica.
- [24] Campbell, C., and Beck, H. (2010). "Toward Internationalized Engineering Curriculum and Challenges". *Proceedings of the 6th Intl. CDIO Conference*. June 15-18, Polytechnique Montréal.
- [25] Sablé, C. (2012). "Savoirs spécialisés, contextes multilingues et multiculturels: étudiants Français Langue Seconde et les écrits professionnalisants." Conférence du GLAT. Genoa, Italy. *Proceedings of the Groupe de Linguistique Appliquée des Télécommunications Terminology conference*. 14-16 May, 2012.
- [26] Global Village 2010. Youtube video. 4 minute online video presentation. <http://www.youtube.com/watch?v=P0jWwH-5kJ4> consulted in January 2013.
- [27] Kramsch, C. (1993). "Context and Culture in Language Teaching". Oxford: OUP.

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